

**§ 86.1406 Equipment required and specifications; overview.**

(a) *Exhaust emission tests.* All vehicles subject to this subpart are tested for exhaust emissions.

(1) *Dynamometer.* (i) When a CST employs steady state loaded operation, the dynamometer must be adjusted to the lowest available inertia weight setting and must meet the load speed relationships described in § 86.1439(d). When a CST employs transient loaded warmup operation or loaded preconditioning, the dynamometer must be adjusted to the power absorption unit and inertia weight settings as described in § 86.129 of this part.

(ii) All other requirements of this paragraph are set forth in §§ 85.2230 and 85.2233 of this chapter.

(2) *Exhaust gas analysis system.* (i) The requirements for the exhaust gas analysis system are set forth in §§ 85.2225 and 85.2233 of this chapter, except that the NO channel is optional. For the purposes of the CST, non-dispersive infrared analyzers are specified for measuring emissions.

(ii) If desired, the line extending between the sample probe and the analyzer may be insulated to minimize condensation.

(b) *Fuel and analytical tests.* Fuel requirements for the CST are specified in §§ 86.113, 86.213, and 86.1413.

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**§§ 86.1407–86.1412 [Reserved]**

**§ 86.1413 Fuel specifications.**

(a) The test fuel to be used for the CST test options described in tables O-96-1 and O-96-2 of § 86.1430(b) must conform to the specifications listed in paragraph (b) of this section except that for manufacturer data submittal testing for the purposes of obtaining a certificate of conformity and for Selective Enforcement Audit testing, the octane specification of the fuels does not apply. For all gasoline-fueled Otto-cycle light-duty vehicles and gasoline-fueled Otto-cycle light-duty trucks (including those certified to operate using both gasoline fuel and another fuel), CST procedures performed for the purpose of obtaining a certificate of conformity must be conducted using the

appropriate gasoline fuel only, as indicated in paragraph (b) of this section.

(b) *CST test fuels by option.* (1) Test Option 1: Use Cold CO fuel as specified in the table in § 86.213–94.

(2) Test Option 2: Use Cold CO fuel, as specified in the table in § 86.213–94; optionally, the Administrator may substitute Otto-cycle test fuel, as described in § 86.113–94(a)(1).

(3) Test Option 3: Use Otto-cycle test fuel as specified in the table in § 86.113–94(a)(1).

**§§ 86.1414–86.1415 [Reserved]**

**§ 86.1416 Calibration; frequency and overview.**

(a) Calibrations are performed as specified in § 85.2233 of this chapter, with the exception that the calibrations performed at 72 hour intervals in § 85.2233(e) of this chapter are instead performed prior to each CST.

(b) At least monthly, or after any maintenance which could alter calibration, the calibration of the analyzer must be checked. The analyzer must be adjusted or repaired as necessary.

(c) Water traps, filters, and conditioning columns must be checked before each test, and adjusted, repaired or replaced as necessary.

(d) Other equipment used for testing must be calibrated as often as necessary in accordance with good engineering practice.

**§§ 86.1417–86.1421 [Reserved]**

**§ 86.1422 Analyzer calibration.**

(a) Determine that the analyzer has met the acceptance criteria specified in § 85.2225 of this chapter.

(b) *Initial and periodic check.* Prior to its introduction into service and at specified periods thereafter, the analyzer must receive calibration in accordance with § 85.2233 of this chapter and with good engineering practice.

**§§ 86.1423–86.1426 [Reserved]**

**§ 86.1427 Certification Short Test procedure; overview.**

(a) The test procedure described in this subpart is designed to measure raw concentrations of CO (percent) and HC (parts per million) in the exhaust flow under conditions and test modes that